



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/671,371	09/26/2000	Lars-Erik Jonsson	34645-494USPT	4735
27045	7590	10/20/2004		EXAMINER
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR C11 PLANO, TX 75024				RYMAN, DANIEL J
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/671,371	JONSSON ET AL.
	Examiner	Art Unit
	Daniel J. Ryman	2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 July 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 11-20 and 34-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 11-20 and 34-41 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 9/26/2000 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 10/12/01.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Response to Amendment

1. Although Applicant traverses Examiner's Restriction Requirement, Applicant does not present arguments as to why Applicant traverses the Restriction Requirement. Therefore, Examiner maintains that the Restriction Requirement is proper.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: ref. 75 (see page 24, line 6 and Fig. 7). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: on page 27, line 17 "R=useful" should be "(R=useful)".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 11-13, 15, 34, 35, and 39-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Koodli (USPN 6,608,841).
6. Regarding claim 11, Koodli discloses a method of transmitting from a first packet communication station (ref. 20) to a second packet communication station (ref. 30) information including context control information (col. 1, line 54-col. 2, line 49 and col. 6, line 66-col. 7, line 29), the context control information used to maintain consistency between header compression contexts respectively associated with the first and second packet communication stations (col. 1, line 54-col. 2, line 49 and col. 6, line 66-col. 7, line 29), comprising: transmitting information other than context control information (payload of packet) between the first and second packet communication stations according to a first transmission parameter (normal transmission) (col. 3, lines 42-56 and col. 7, lines 30-49); determining that context control information is to be transmitted from the first packet communication station to the second packet communication station (col. 3, lines 42-56 and col. 7, lines 30-49); in response to the determination that context control information is to be transmitted from the first packet communication station to the second packet communication station (col. 3, lines 42-56 and col. 7, lines 30-49), providing a second transmission parameter (repetition of context information in following packets) according to

Art Unit: 2665

which the context control information can be transmitted from the first packet communication station to the second packet communication station with a probability of delivery that exceeds a probability of delivery associated with said step of transmitting information other than context control information according to the first transmission parameter (col. 3, lines 42-56 and col. 7, lines 30-49); and transmitting the context control information from the first packet communication station to the second packet communication station according to the second transmission parameter (col. 3, lines 42-56 and col. 7, lines 30-49).

7. Regarding claim 12, referring to claim 11, Koodli discloses that said second transmission parameter specifies that the context control information is to be transmitted from the first packet communication station to the second packet communication station in a plurality of consecutively transmitted packets (col. 3, lines 42-56 and col. 7, lines 30-49).

8. Regarding claim 13, referring to claim 12, Koodli discloses that each of the consecutively transmitted packets includes all of the context control information (col. 3, lines 42-56 and col. 7, lines 30-49) where the transmission of first order values and second order values is taken to be “all of the context control information”.

9. Regarding claim 15, referring to claim 11, Koodli discloses that the context control information includes one of a context update (first order difference) and a context update request (second order difference) (col. 1, line 54-col. 2, line 49 and col. 6, line 66-col. 7, line 29) where the second order difference is used to determine whether the first order difference should be updated.

10. Regarding claim 34, Koodli discloses an apparatus for transmitting from a first packet communication station (ref. 20) to a second packet communication station (ref. 30) information

including context control information (col. 1, line 54-col. 2, line 49 and col. 6, line 66-col. 7, line 29), the context control information used to maintain consistency between header compression contexts respectively associated with the first and second packet communication stations (col. 1, line 54-col. 2, line 49 and col. 6, line 66-col. 7, line 29), comprising: an output for transmitting information (payload of packet) other than context control information between the first and second packet communication stations according to a first transmission parameter (normal transmission) (col. 3, lines 42-56 and col. 7, lines 30-49); a context control information generator coupled to said output for generating context control information to be transmitted from the first packet communication station to the second packet communication station (col. 1, line 54-col. 2, line 49 and col. 6, line 66-col. 7, line 29); a transmission parameter generator having an input for receiving an indication that context control information generated by said context control information generator is to be transmitted from the first packet communication station to the second packet communication station (col. 3, lines 42-56 and col. 7, lines 30-49), said transmission parameter generator operable in response to said indication for providing a second transmission parameter (repetition of context information in following packets) according to which the context control information can be transmitted from the first packet communication station to the second packet communication station with a probability of delivery that exceeds a probability of delivery associated with transmission of information other than context control information according to the first transmission parameter (col. 3, lines 42-56 and col. 7, lines 30-49); and said output responsive to said second transmission parameter for transmitting the context control information from the first packet communication station to the second packet

Art Unit: 2665

communication station according to the second transmission parameter (col. 3, lines 42-56 and col. 7, lines 30-49).

11. Regarding claim 35, referring to claim 34, Koodli discloses that said second transmission parameter specifies that the context control information is to be transmitted from the first packet communication station to the second packet communication station in a plurality of consecutively transmitted packets (col. 3, lines 42-56 and col. 7, lines 30-49).

12. Regarding claim 39, referring to claim 34, Koodli discloses that said output, said context control information generator, and said transmission parameter generator are provided in the first packet communication station (Fig. 1; col. 1, line 54-col. 2, line 49 and col. 6, line 66-col. 7, line 29).

13. Regarding claim 40, referring to claim 39, Koodli discloses that the first packet communication station is a radio communication station operating in a telecommunications network (col. 2, lines 50-55; col. 4, lines 42-60).

14. Regarding claim 41, referring to claim 34, Koodli discloses that the context control information includes one of a context update (first order difference) and a context update request (second order difference) (col. 1, line 54-col. 2, line 49 and col. 6, line 66-col. 7, line 29) where the second order difference is used to determine whether the first order difference should be updated.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 16, 18, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koodli (USPN 6,608,841).

17. Regarding claims 16 and 36, referring to claims 11 and 34, Koodli discloses that the second transmission parameter specifies that the context control information is to be transmitted from the first packet communication station to the second packet communication station in each of a plurality of packets respectively transmitted periodically (col. 3, lines 42-56 and col. 7, lines 30-49). Koodli does not expressly disclose that each of the plurality of packets is transmitted periodically in accordance with a predetermined frequency. However, Koodli does disclose that one of the parameters whose first order parameter changes infrequently, if at all, is the timestamp (col. 2, lines 13-21). Thus, Koodli suggests that the plurality of packets are transmitted periodically in accordance with a predetermined frequency. It would have been obvious to one of ordinary skill in the art at the time of the invention to transmit the context control information from the first packet communication station to the second packet communication station in each of a plurality of packets respectively transmitted periodically in accordance with a predetermined frequency in order to ensure that the timestamp's first order difference does not change, such that the timestamp value can be compressed.

18. Regarding claim 18, referring to claim 16, Koodli discloses that each of the periodically transmitted packets includes all of the context control information (col. 3, lines 42-56 and col. 7, lines 30-49) where the transmission of first order values and second order values is taken to be “all of the context control information”.

Art Unit: 2665

19. Claims 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koodli (USPN 6,608,841) as applied to claims 13 and 16 above, and further in view of Applicant's Admitted Prior Art.

20. Regarding claims 14 and 17, referring to claims 13 and 16, Koodli discloses that the context control information includes a context update request (second order difference) (col. 1, line 54-col. 2, line 49 and col. 6, line 66-col. 7, line 29) where the second order difference is used to determine whether the first order difference should be updated, further comprising receiving the context update request (second order difference) at the second packet communication station (col. 1, line 54-col. 2, line 49 and col. 6, line 66-col. 7, line 29); and receiving multiple context updates at the second packet communication station corresponding to a received context update request (col. 3, lines 42-56 and col. 7, lines 30-49). Koodli does not expressly disclose determining whether a context update corresponding to the received context update request has already been sent from the second packet communication station to the first packet communication station, and ignoring the received context update request if a corresponding context update has already been sent from the second packet communication station to the first packet communication station since Koodli discloses that the context request updates and the context updates are sent in a single direction (from the first communication station to the second communication station). Examiner notes that Koodli teaches that the thrust of the invention is to provide robust header compression in the presence of unreliable networks such that the principles of the invention can be applied in other systems (col. 12, lines 7-30). Applicant admits as prior art two context update schemes (page 3, line 19-page 5, line 6). The first scheme, similar to the scheme used by Koodli, is to periodically send context refreshes from one station to the

Art Unit: 2665

other (page 3, line 21-page 4, line 11). The second scheme, which reduces average header overhead for the system compared to the first scheme, only sends context updates when requested by the decompression station (page 4, line 12-page 5, line 6). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the second system rather than the first system in order to reduce average header overhead for the system. Thus, Koodli in view of Applicant's admitted prior art suggests transmitting context update requests from the first station to the second station and repeatedly transmitting, in response, context updates from the second station to the first station. As such, Koodli in view of Applicant's admitted prior art suggests transmitting multiple context update requests from the first station to the second station in order to ensure that a context update is received over an error-prone link; determining whether a context update corresponding to the received context update request has already been sent from the second packet communication station to the first packet communication station; and ignoring the received context update request if a corresponding context update has already been sent from the second packet communication station to the first packet communication station since redundant transmission of a packet is an inefficient use of bandwidth, as is well known in the art.

21. Claims 19, 20, 37, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koodli (USPN 6,608,841) as applied to claims 11 and 34 above, and further in view of Seshadri et al. (USPN 5,799,013).

22. Regarding claims 19 and 37, referring to claims 11 and 34, Koodli does not expressly disclose that the second transmission parameter specifies that the context control information is to be transmitted from the first packet communication station to the second packet

communication station at a higher power level than a power level specified by the first transmission parameter. However, Koodli does disclose that the system uses the second transmission parameter in order to ensure successful transmission of the context control information (col. 3, lines 42-56 and col. 7, lines 30-49). Seshadri teaches, in a wireless communication system, transmitting important information by a second transmission parameter which specifies that the important information is to be transmitted from the first packet communication station to the second packet communication station at a higher power level than a power level specified by the first transmission parameter (col. 1, line 63-col. 2, line 14 and col. 12, line 58-col. 13, line 21) in order to provide higher error protection for the important information (col. 1, lines 63-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the second transmission parameter specify that the context control information is to be transmitted from the first packet communication station to the second packet communication station at a higher power level than a power level specified by the first transmission parameter in order to provide higher error protection for the context control information.

23. Regarding claims 20 and 38, referring to claims 11 and 34, Koodli does not expressly disclose that the second transmission parameter specifies that the context control information is to be transmitted from the first packet communication station to the second packet communication station using a lower channel coding rate than a channel coding rate specified by the first transmission parameter. However, Koodli does disclose that the system uses the second transmission parameter in order to ensure successful transmission of the context control information (col. 3, lines 42-56 and col. 7, lines 30-49). Seshadri teaches, in a wireless

Art Unit: 2665

communication system, transmitting important information by a second transmission parameter which specifies that the important information is to be transmitted from the first packet communication station to the second packet communication station using a lower channel coding rate (1/4 coding: four repetitions of a symbol) than a channel coding rate specified by the first transmission parameter (1/2 coding: two repetitions of a symbol) (col. 1, line 63-col. 2, line 14 and col. 10, line 51-col. 11, line 12) in order to provide higher error protection for the important information (col. 1, lines 63-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the second transmission parameter specify that the context control information is to be transmitted from the first packet communication station to the second packet communication station using a lower channel coding rate than a channel coding rate specified by the first transmission parameter in order to provide higher error protection for the context control information.

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Geiger et al. (USPN 5,987,022) see entire document which pertains to compression techniques. Pazhyannur et al. (USPN 6,198,735) see entire document which pertains to retransmission of packets containing compressed headers. Le et al. (USPN 6,542,931) see entire document which pertains to providing feedback in systems using header compression.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 7:00-4:30 with every other Friday off.

Art Unit: 2665

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel J. Ryman
Examiner
Art Unit 2665



HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600